



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

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ATLANTA, GEORGIA 30303-8960

May 5, 2008

Ms. Kimberly D. Bose  
Secretary  
Federal Energy Regulatory Commission  
888 First Street, Room 1A  
Washington, DC 20002

Subject: Docket CP08-13-000; EPA's NEPA Review of FERC DEIS for Floridian  
Natural Gas Storage Project; Indiantown, Martin County, Florida

Dear Ms. Bose:

Pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) Region 4 has reviewed the Federal Energy Regulatory Commission's (FERC) Draft Environmental Impact Statement (DEIS) for the Floridian Natural Gas Storage Project proposed for Martin County, Florida. As opposed to a Liquefied Natural Gas (LNG) terminal that would receive LNG from overseas for domestic distribution, the proposed project would store LNG from existing pipelines until needed.

The proposed project would receive natural gas (feed gas) from the existing Gulfstream and FGT pipelines, liquefy it and store it as LNG for future use. When needed, the stored LNG would be vaporized by a closed circulating warming system and returned to the Gulfstream and FGT pipelines for distribution. In addition to emergencies and peak demand needs, there is also an overall increasing demand for natural gas (e.g., page 1-1 indicates that 90% of the new power plants in Florida are powered by natural gas). The project would occur in two phases, with one full-containment LNG storage tank being completed per phase; however, the impacts of both phases would be covered in the present NEPA document with Phase II scheduled to be in service no later than 2016. In addition to the storage facility, the FERC applicant (Floridian Natural Gas Storage Company LLC: FGS) is requesting one metering station and various pipelines to receive from, sendout and interconnect with the existing Gulfstream and FGT pipelines. No compressor stations (and their attendant noise and air emissions) would be needed along the pipeline.

Although the DEIS document indicates that the due date for public comments is May 5, 2008, we note that the actual due date is May 12, 2008, based on the EPA filing of the DEIS in Washington, DC. It is unclear if FERC provided a follow-up notice to the public to clarify this. In either case, we suggest that the full time to receive public review comments (45 days for DEISs) be allowed, starting with the *Federal Register* notice date of March 28, 2008, and ending May 12, 2008.

## ► Alternatives

The proposed project would be located in Martin County near unincorporated Indiantown, Florida. The applicant's preferred alternative is a brownsfield site (former Florida Steel site that recycled car steel) being remediated under EPA supervision as an NPL Superfund site for contamination of soil (lead, zinc, PCBs) and groundwater (sodium). The 144.63-acre site includes a non-project soil disposal area (the "vault") and would not interfere with continued remediation (spray irrigation of groundwater). Page 4-11 states that "[a]ll contaminated soils on the storage facility have been removed, treated, and placed in a secure landfill." Although there are EPA deed restrictions regarding future use of the site, the project has apparently been cleared to proceed at the brownsfield site if the site is selected. Page 4-45 states that "[i]n a letter to FGS (EPA, 2006a), EPA stated that 'based upon the facts presently known to EPA, the Agency is of the opinion that the proposed use of the Property does not pose significant incompatibility issues with potential future cleanup activities.'" The site is currently not owned by the applicant but FGS has an "exclusive option" (pg. 4-40) to purchase the site.

The brownsfield site has an industrial character and is bounded by the CSX railroad/SR 710 corridor and the Cogentrix power plant, and is also near the FPL Martin Power Plant. The site and pipeline ROW would impact 132.01 acres of land (uplands and wetlands) during construction, with permanent impacts being less (pg. 4-24). Wetlands were characterized as being "previously disturbed" and dominated by invasive species such as Brazilian pepper and Australian pine.

In addition to the preferred brownsfield site, five alternate sites were considered (two FPL sites near the FPL Martin Power Plant, a Turkey Point site and two Palm Beach sites). System alternatives were also contemplated (use of LNG deepwater terminals and reservoir storage in salt domes, aquifers and depleted oil and gas wells). Additional discussion on these alternatives and other project aspects is provided in the enclosed *Additional Comments*.

## ► Wetlands

Although the preferred 144.63-acre site contains 27.95 acres of wetlands and waterbodies, the storage facility footprint (53.1 acres) is to avoid any on-site wetland fill. We concur with this approach. Beyond direct impacts, site wetlands should also be protected against indirect impacts such as non-point source runoff. In regard to the pipeline ROW which will affect 25.3 acres, some wetlands will be encountered even though the pipeline will be co-located with an existing transmission line corridor. A total of 2,620 linear feet of wetlands would be crossed. Impacts are to be minimized by reducing the construction ROW to 65 feet in wetlands and boring beneath two wetland ditches to be crossed. Three other ditches would be crossed by the open-cut method. Work space associated with wetland crossings would temporarily impact 3.91 acres of wetlands along the pipeline, which are to be restored as wetlands after pipeline placement. No forested wetlands will be permanently converted.

With regard to wetland impact documentation, the DEIS indicates that there will be no “permanent” wetland impacts since construction impacts would be restored as wetlands and no forested wetlands would be permanently converted to herbaceous wetlands. As previously stated, we appreciate the wetland avoidance and minimization procedures. However, we believe that the FEIS should nevertheless document the centerline acreage (permanent ROW) along wetland crossings. Despite the planned wetland restoration along this centerline, there would still be temporal functional losses until restoration is complete (1-2 growing seasons), hydrologic circulation patterns may be altered after pipeline placement, any natural succession to forested wetlands would not be allowed along the centerline, and pipeline maintenance disturbing the revegetated wetlands is possible. Bore crossings beneath wetlands should also be documented but, in contrast, could be designated as having no construction or permanent wetland impacts (beyond any temporary work space impacts).

Despite wetland avoidance and post-construction restoration efforts, we assume the applicant has coordinated these proposed crossings with the U.S. Army Corps of Engineers (COE). Temporal wetland losses should be compensated and invasive species should not be allowed to colonize the revegetated areas. Maintenance of ROWs should avoid use of herbicides (mechanical or manual methods preferred, especially near waterbodies). Any use of herbicides should be limited to EPA-registered products applied by trained personnel according to labeled directions. Herbicide application should not be conducted by aircraft to avoid overspray potential and resultant opportunities for invasives to establish in denuded areas.

► **Noise**

Noise effects were modeled and calculated for the nearest residences (2 sites with a total of 4 clustered single-family residences) for temporary construction and continuous operational noise. Results at these receptor sites showed a low DNL noise increase during construction and fairly low DNL noise increase during operation. At the property line, however, two corners of the site would exhibit significantly elevated background (ambient) levels (+18.6 DNL and +16.2 DNL: pg. 4-68). In order to attenuate these levels, FGS is offering shielding around stationary sources at the facility. We would concur with the use of shielding, but further suggest that source reduction be added so that noise levels would already be less at the source. To assist in this, the FEIS should disclose what the main noise sources of the facility would be. Given that the facility would be new, it presents an excellent opportunity to install technologies that emit low noise levels for these main sources. The combination of source reduction, shielding and site topography should reduce noise levels at the property line. In addition, we support the FERC staff’s recommendation to verify noise levels at the nearest residences after prospective operation and request that any determined need for project adjustments to achieve the 55 DNL target be made as soon as possible. We also recommend that this noise level verification and adjustment process be required at the site property line.

Additional truck traffic (and associated noise levels) would occur during construction, with a peak month of 820 truck deliveries and an average of 41 deliveries per day reported (pg. 4-53). This number of truck trips was characterized as “minor” compared to the average daily traffic (ADT) levels of 7,800 vehicles per day. However, the FEIS should clarify that 820 truck deliveries implies an additional 820 return trips, so that an average of 41 deliveries per day also implies an average of 41 return trips. Further, for a perspective, we recommend that the present percentage of truck traffic in the 7,800 ADT be provided in the FEIS (i.e., is there already a lot of truck traffic?). Finally, the expected truck traffic to and from the LNG storage facility during normal project operation should also be disclosed.

► **Air Quality**

The hours of operation described on page 4-56 for the various fuel burning equipment should be made enforceable. Recommended options to achieve this are through the applicant’s commitment in the FEIS, inclusion as a FERC staff Recommendation in the FEIS, incorporation in FERC’s Record of Decision (ROD or FERC’s Final Order equivalent), through permit conditioning and/or other means.

► **Environmental Justice (EJ)**

Although the DEIS provides basic socioeconomic information (pp. 4-48, 5-5), it does not provide the demographics of the area (levels of minority and low-income populations). The FEIS should provide such data (percentage shares) for relevant U.S. Census block groups (BG) to determine if project effects would disproportionately affect potential EJ communities. These data should be compared to adjacent BGs and counties, and to the state of Florida to assist in the site selection process (i.e., is the site, with its impacts, located in an area with a disproportionately higher share of minorities and low-income populations relative to surrounding areas?). In addition, the demographics of the nearest residences/residents to the proposed site should be provided. Also, would local minorities and low-income groups have any opportunities to access project benefits, such as jobs during construction (270 temporary jobs on average, with a peak of 450 jobs) and operation (32 permanent jobs)? What training opportunities would be offered to all demographics for such employment?

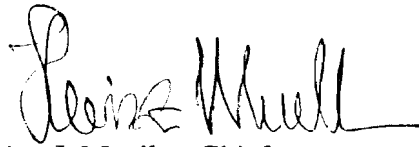
► **EPA DEIS Rating**

EPA rates this DEIS as an “EC-1” (Environmental Concerns, with some additional information requested in the FEIS). We appreciate that a brownfield site is proposed for reuse consistent with its deed restrictions, and that many aspects of the project would reuse/recycle resources. Wetland impacts would also be minimized through avoidance and minimization, including the use of bore crossings. Noise increases at the nearest residences during prospective operation do not appear significant, but are to be monitored against the 55 DNL target per FERC staff recommendation. Noise impacts at the southern property line are too elevated and should be attenuated through FPS-offered shielding as well as EPA-recommended source reduction. It is also

requested that the EJ demographics of the project area be further documented in the FEIS. Other informational requests include verification of good water quality for used hydrotest waters (storage tanks and pipelines) before these waters are returned, as proposed, to the St. Lucie Canal through coordination with State of Florida's NPDES Program. EPA also recommends continued coordination with the COE on wetlands impacts and restoration and with Superfund authorities regarding ongoing site remediation.

We appreciate the opportunity to review this DEIS. Should you have questions, feel free to coordinate with Chris Hoberg of my staff at 404/562-9619 or [hoberg.chris@epa.gov](mailto:hoberg.chris@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Heinz Mueller", with a long horizontal flourish extending to the right.

Heinz J. Mueller, Chief  
NEPA Program Office  
Office of Policy and Management

Enclosure: *Additional Comments*

cc: FERC Gas Branch 3 – Washington, DC

## ADDITIONAL COMMENTS

### \* Alternatives

+ *Site Alternatives*: Of the five site alternatives offered in addition to the preferred brownsfield site (pg. 3-5), several do not seem viable (reasonable and feasible). While we understand that project and land constraints can make site selection difficult, and that it was good documentation to have considered these sites, they are not realistic candidates for multiple reasons. These sites include two plots near the FPL Martin plant that were not for sale and plots that are distant from the desired interconnection with the Gulfstream and FGT pipelines (Turkey Point, FL), or are otherwise undesirable (Turkey Point is the site of an FPL nuclear power plant). One of the two Palm Beach plots was also too close to a private airport runway. However, other sites considered were viable, consistent with NEPA, but not necessarily favorable (pg. 3-6). For the pipeline, the preferred alignment appeared reasonable since it would co-locate with an existing transmission line ROW and was characterized as having the least amount of impacts. Other pipeline alternatives, such as co-location with the CSX railroad or SR 710, were not feasible due to ROW conflicts or not favorable due to greater wetland impacts.

+ *System Alternatives*: Several systems alternatives were also discussed. These included LNG deepwater terminals and various underground storage reservoirs (salt domes, aquifers and depleted oil and gas wells). We agree that salt dome storage is inappropriate given Florida's geology and that LNG terminals are not necessarily intended for storage (however, in addition to deepwater terminals, the DEIS could have also discussed onshore LNG terminals under the jurisdiction of FERC). Aquifer storage is being piloted by the COE for Everglades water storage, but may not be appropriate for LNG storage and is expensive. Recovery at mature oil and gas wells can often also be enhanced through "flooding" (CO<sub>2</sub>) such that LNG storage there may interfere with such follow-up extraction. Florida extraction wells are also often associated with environmentally sensitive areas such as the Everglades.

+ *Water Pipeline Alternatives*: Alternatives for routing project surface water to the preferred brownsfield site were not discussed. Surface water is needed for hydrotesting the competence of the storage tanks (over 32 million gallons per tank) and the pipeline pipe. Pipeline connection to the St. Lucie Canal is proposed to receive and return such test water. Such water pipelines routes and their impacts should be discussed in the FEIS, either as a jurisdictional facility (since hydrostatic testing is required for FERC infrastructure) or non-jurisdictional facility.

However, discussion of such alternatives may not be needed since page 4-31 states that the applicant "...would use an existing permitted irrigation intake structure..." It is unclear if this implies that the water pipeline is already in place or that only the intake is in place and is permitted to some applicant. The FEIS should discuss this and make this clear earlier in the FEIS (e.g., executive summary and alternatives chapter).

+ *No Action Alternative*: Page 3-1 suggested that if the no action alternative was selected, natural gas customers could select other energy sources such as oil. While oil is one option, there are many others that are not mentioned in this section that are emerging, including renewables such as solar, wind, wave/tidal and biofuels – used either individually or in combination (despite the fact that natural gas has fewer emissions than oil, it has generally more emissions than renewables and other forms of energy being considered). While these alternates may not yet be fully practical, the expansion of the availability of natural gas through LNG storage could slow the emergence of these energy forms. Conversely, selection of an action alternative (project implementation) would make natural gas more available which could increase or expedite development and associated developmental impacts. We recommend that the FEIS acknowledge these induced effects on renewables and development, even though we realize that FERC must be responsive to their applicants when project applications are reasonable.

+ *Security Alternatives*: Related to the alternatives discussion, EPA will defer to FERC and the U.S. Department of Homeland Security Administration (DHS) regarding the selection of sites relative to the security of natural gas systems discussed in the DEIS (pg. 4-93). However, for these agencies' consideration, we note that the project area (2-mile radius) encompasses the Cogentrix and Martin power plants and the CSX railroad and SR 710 corridor, with a private airport also nearby. Regarding potential (accidental or intentional) explosions, would the site be vulnerable from these sources? The figures on pages 4-87 and 4-90 suggest compliance with the thermal radiation and vapor dispersion exclusion zone thresholds for siting requirements. Nevertheless, siting an LNG storage facility close to power plant facilities, transportation corridors and an airport would seem undesirable.

\* *Noise* – We appreciate that FERC has “adopted” (pg. 4-65) EPA’s 55 DNL noise level for public noise protection. The rationale for this noise level was determined and reported in EPA’s so-called “Levels” document published in the 1970’s. It should be noted, however, that this noise level is more of a target than a noise criterion, guideline or standard. However, it is a useful target for proposed projects in terms of gauging attenuation at site boundaries, the nearest residences or other sensitive receptors.

The DEIS indicates that a +3 dBA increase in noise levels is not detectable by the human ear (pp. 4-66 & 4-105). We agree. However, this conclusion should be limited to instantaneous measurements rather than other averaged noise descriptors such as the day-night level (DNL) often used in the DEIS. In contrast, a +3 dBA increase in DNL is statistically detectable by the human ear. In fact, a +1.5 DNL increase in noise levels within a background of a 65 DNL contour at an airport is considered a significant increase according to FICON (Federal Interagency Committee on Noise). For quieter backgrounds (e.g., 60 DNL), greater increases are required for significance (+3.0 dBA). Consequently, since the project’s ambient sound level is similar to 60 DNL (pg. 4-66), project increases may not be significant increases at the nearest noise receptors to the site (but would be at the southern property line (pg. 4-68). The DEIS should be modified in the FEIS regarding the noise effects of increases measured in DNL.

\* Air Quality – We also note that the redundant generators for emergency power are diesel-fired. Are natural gas driven generators available that would produce fewer emissions than diesel and also might have less fuel storage issues?

\* Wetlands – EPA should be included as a consulting agency for all FERC staff recommendations involving wetland assessments. It is unclear as to why this is omitted in the present (e.g., pp. 2-15, 5-12) and many previous FERC pipeline NEPA documents. In any case, efforts should be made to avoid and minimize wetlands for project sites, pipeline ROWs and staging areas.

\* Hydrotesting – We appreciate that no biocides will be added to the hydrotest waters that are to be taken from and returned to the St. Lucie Canal. We also agree with the screening of the intake to help prevent impingement and entrainment of fish eggs, larvae and juveniles. We recommend that this be further discussed with the FWS and their state counterparts to optimize intake and discharge flow rates, mesh size, seasonal impacts, intake water depth, etc.

In the DEIS sections discussing the return of hydrotest waters to the St. Lucie Canal, the need for an NPDES permit for such point-source discharge is sometimes referenced (pg. 2-22) and sometimes not (pp. 2-19, 4-16). For clarity, we suggest that it be referenced each time (or at first mention) to the extent that discharge is consistent with the State NPDES permit. Regarding water quality, will there be any new construction constituents of concern added to the wash water from tank and pipeline hydrotesting? Will there be any testing to verify good water quality? As always, consistency with the NPDES permit is required.

As noted in the DEIS (pg. 4-14), the COE under the Comprehensive Everglades Restoration Plan (CERP) and its state sponsor are investing considerable monies and effort in cleaning up the Indian River Lagoon (IRL) using Stormwater Treatment Areas (STAs) and other restoration techniques. As such, introduction of metals, solvents or other constituents from new construction into the IRL by way of the St. Lucie Canal could be counterproductive to those efforts.

\* Landscaping Water – We note (pg. 4-13) that an existing well on the brownsfield site would be used for landscape watering and that this well “...would have negligible effects on nearby wells and the on-site groundwater remediation system.” However, page 4-45 stated that “[a]ccording to EPA (2006), groundwater contaminant concentrations have decreased and are nearing cleanup standards.” Since the spray irrigation cleansing of groundwater is still ongoing, is it desirable to already use groundwater before it is deemed fully clean, even for landscaping purposes? We will defer to the Superfund authorities and site deed restrictions. In any case, however, we wish to promote the use of xeric landscaping that employs native plants which require less watering, such that consumptive water use in south Florida will be minimized.

\* Cumulative Impacts – The cumulative impacts section (pg. 4-98) was generally well written. However, this section could have been improved by listing the impacts (at least

qualitatively) of local industrial sites such as power plants, particularly those impacts that are common to both the proposed LNG storage facility and the existing, proposed or reasonably foreseeable facilities in the project area. The contaminants of the Superfund site might also be briefly reiterated and that discussion that the soils and groundwater of the site would not be re-contaminated by the proposed project. Finally, the fact that a Phase II is planned should be addressed since those impacts, even though covered in the present EIS, would be cumulative to Phase I impacts.

With regard to the nearby planned residential “Quillen Development” referenced in this section as future actions (pg. 4-101), we note that this development would be within 1.25 miles of the site. Since this is farther away than the existing residences assessed for noise impacts, noise levels presumably would be less (attenuation by distance). The proposed development also appears to be north of the site where noise levels at the property line were not very elevated compared to the south (pg. 4-68). Nevertheless, we suggest that realtors be advised (by FERC, applicant or other appropriate vehicle) that the noise environment at the development may be elevated by the project (with continuous operational noise) if the site is selected and the project is approved.

\* Affected Residents – Four single-family residences clustered at two sites are located within about 0.50 miles of the preferred site. It is unclear, however, how many residences/residents (if any) are located close to the pipeline (pg. 4-44). The FEIS should address this.

\* EIs – We appreciate that the project Environmental Inspector (EI) is to have some independence, including stop-work authority. However, it is unclear what “independent status” (pg. 2-25) entails. We recommend that even though the EI would be compensated by the applicant, that he/she report not only to the applicant but also concurrently to FERC (we recommend this be added to the list of EI duties on page 5-11). Moreover, we agree that “...FERC would conduct independent inspections to monitor the Project for compliance with the Commission’s environmental conditions.” Any project non-compliance should be quickly corrected.

\* Jurisdiction – We suggest that Table 1.3-1 for “Permits/Approvals/Consultations” be expanded to include EPA’s continued supervision of the Superfund site as a form of “consultation”. Additionally, EPA’s oversight of the Florida NPDES Program might also be referenced in this table.

\* GHGs – For safety and economic reasons, extensive efforts will surely be made to prevent any natural gas leaks from the storage facility and its pipelines. Such leaks should also be prevented from a greenhouse gas (GHG) emissions perspective, i.e., to minimize potential climate change effects. Methane (CH<sub>4</sub>), the main component of natural gas, is a powerful GHG, many times more insulative than carbon dioxide (CO<sub>2</sub>) in the stratosphere. In addition, given that LNG must be kept refrigerated at -260°F, any refrigerants escaping from such a major cooling system could also contribute GHGs

and should therefore be prevented (the FEIS should clarify if the refrigerants listed on page 2-4 are GHGs, although we note that at least one of these constituents (methane) is a GHG).

\* Reuse/Recycle – EPA is impressed with the number of reuse/recycling efforts proposed by the applicant and the FERC staff (pg. 2-16). These include potential reuse of the preferred brownsfield site itself as well as the site's existing railroad infrastructure (continued use for some large site deliveries), rails (offered for reuse to CSX or as scrap) and wooden ties (offered for reuse to local landscapers) and existing concrete foundations (crushed for reuse as site gravel). We assume these items have been cleared for reuse by Superfund authorities. In addition, some of the tank hydrotest waters would also be reused for pipeline testing (pg. 2-22) and some of the cleared vegetation may be chipped (pg. 2-21) for mulch. We also note that tree stumps will be cut at ground level when possible as opposed to being grubbed (uprooted), which will reduce the potential for soil erosion since root systems will be left in place (pg. 2-20).

\* Truck Loading Option – We find that a second entrance to the site (pg. 4-53) is paramount to help ensure that the truck loading option can succeed during local emergencies (should the pipeline option become disabled) and as second entrance/exit for any on-site emergencies.

\* Construction Timeframes – We appreciate that the DEIS provides construction timeframes for several processes. For example, hydrotesting is expected to take five weeks (pg. 4-44). Such timeframes will help affected residents gauge the magnitude of construction impacts.

\* Blasting – Since the site is generally level, we assume there will be no blasting necessary during construction. The FEIS should verify. Such blasting or any pile driving might interfere with groundwater site remediation.